



December 8, 2020

Brandt Design Group
Attn: Kate Miller
66 Bell St Unit #1
Seattle, WA 98121

Team,

Following the full survey and documentation of all existing conditions at Building 18 in Magnusen Park for the new Outdoors For All facility, I have prepared the following report. There are two main window types/vintages present. The ground floor and a couple of the second-floor windows are of an older and more traditional style of steel window with the predominant windows at the second level appearing to be newer and in not as good condition.

The ground floor windows are assembled with the glazing compound installed to the interior and have the windows “ganged” or assembled together with a steel assembly and bolts. The upper floor windows are all individually framed and capped to achieve the “ganged” appearance. These posts at the mullions show deterioration and heavy levels of rust in locations.

The initial stage of the work for the steel window assemblies, both the glazing compound and perimeter joint sealant will be to have an asbestos abatement contractor remove the potential ACM if ACM is present. I can work with them as needed. This is unknown at this time. If the abatement is not required, Legacy would remove the compound, existing glass, and frames if needed.

All windows have degrees of rust, failure of glazing, and deflection on the operator sashes that either prohibit the sashes from closing and sealing completely or bind the sashes so that they are not currently operable. In many of the sealed windows, the operator panels have been heavily painted or even caulked. Many locations have bent or deflected center pivot hinges and there are quite a few missing handles.

The windows in the fire hose drying tower are missing. There are components of the framing and steel mesh for plaster remaining in the masonry but the sashes/frames are



all missing. It appears that there were never window frames in these openings and that perhaps the design was for them to be open for the hose drying. If there were windows at one point, they are gone now. The interior of these windows was ply wooded over as well as the exterior. The interior side was removed for verification and photo-documenting for the survey.

The overall condition of the steel windows are sound enough to restore with a pretty high level of repairs. Some windows will likely not adjust to full operation and will be required to be sealed. Most of the operators will likely have a degree of air infiltration that will not be able to be addressed. The only means to perimeter seal the windows will be to relief cut around the edge of the window frames and install joint sealant at the masonry on the interior and exterior. The glazing is broken in much of the windows so very little historic glazing is going to be saved.

In the event of restoration, some form of performance improvement should be considered for the glazing. The solar heat gain of the single glazed steel would be pretty considerable, especially considering the intent for the interior space.

In all, given the condition of the windows, the change in purpose, and the inability to do any legitimate water-proofing, it is Legacy's recommendation that a replacement window be entertained in keeping with the historic appearance of the building but allowing for making improvements to form and function.

Lead paint is a given on this project and any work would have to include a lead work plan, initial air sampling, and proper disposal of waste.

I have included a cost to replace the windows with an Arcadia brand, steel window replacement. Work and notes as follows:

1. The windows can either be demolished by Legacy Renovation at time of install or will need to be demolished by ACM abatement contractor in conjunction with Legacy for frame treatment and temporary protection.
2. The window masonry openings will be prepared with a buck system and Wet flash weather-proofing system with sill pans.
3. New windows installed and caulked into the openings according to developed water-proofing plan.
 - a. Windows are thermally broken steel.
 - b. Performance Low-e coated glass will be installed after installation.



c. Windows are custom factory painted per color provided.

This scope covers the entirety of the work in each of the window openings called out as described above for Legacy Renovation to perform as a sub-contractor. Some notable inclusions:

- Exterior and interior access as needed for work.
- Temporary protection in the event that openings become open to the weather.
- Compliant site-specific safety plan coordinated with General Contractor and administered and participated in by Legacy Renovation. This is to include a full Lead/ACM work plan and disposal procedure.
- Applicable submittal and supplemental materials.
- Coordination and attendance to Subcontractor coordination meetings when labor presence is on site.

This is very inclusive to completing the scope of work involved and Legacy Renovation is self-sufficient on a project of this size. Some notable exclusions:

- Historic application and review.
- Owner meetings or direct communication with design team, owners' representatives, or building occupants (if applicable).
- On-site storage for lay-down materials, tools and jobbox, and access machinery.

Legacy Renovation has performed on many projects of this style and type. We know the types of conditions that are likely to arise during a project like this. We can provide extensive references and qualification documentation if needed.

Thanks for the opportunity and please call if you have any questions.

Troy Axe
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Tacoma, WA 98409
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11/13/2020

Outdoors for All Window Remediation Summary and Recommendations

To whom it may concern,

As the Building Envelope Consultant on the project, BEE Consulting, LLC has reviewed the proposed strategies put forward by Legacy Renovations, as outlined in the *“RAFN-Magnusen(sic) Park Present 10-1-20”* document presented to, and discussed with, the Outdoors for All Tenant Improvement/Historic Renovation project team at the behest of the General Contractor, RAFN.

Based on this information and our experience as Building Envelope specialists, BEE offers the following brief summary, considerations and recommendations:

Summary

The proposed strategies break down over two distinct approaches: remediation in place or full replacement of the window systems. Remediation in place involves removal and replacement of the glass in the existing windows, while leaving the existing frames in place. These frames would then be cleaned and repaired to the extent that they can be re-assembled and re-finished to as close to the original historic appearance as possible. An attempt would be made at maintaining the original glass however there would likely be instances where new, thermally efficient and Energy Code compliant “Spacia” glass (glazing) would need to be used due to damage that was either pre-existing or occurred during replacement.

The full replacement option would involve cutting the existing window units free of the masonry mass walls and replacing them with newly manufactured units. These new units would be produced with an eye towards replicating the original historic features and finishes as closely as possible.

Considerations

The considerations between the two approaches can best be outlined in terms of cost, schedule historic aesthetics and finally, performance benefits for the occupants. The remediation in place option cost/schedule considerations involve significant time and labor being put forward in terms of delicately removing the existing glass without damage as well as having to repair/refinish all of the frame elements in place without imparting any damage due to these efforts. In addition, there would likely be appreciable time/effort spent in having to patch in framing elements that have to be replaced due to deformation and/or degradation. This is unfortunately hard to quantify due to not having a precise amount of material that may require this at this time. It is also not possible to calculate the additional cost of having to replace glazing that is damaged as that is an unknown until the work occurs. This option will likely yield the most historically accurate results due to maintain the existing framing elements however they will also offer the same thermal and solar heat gain characteristics of these existing windows and will likely result in greater heating/air conditioning costs incurred by both the tenant (Outdoors for All) and owner (Seattle Parks and Rec.) due to these windows being less thermally efficient. Maintenance costs would also increase due to a higher degree of difficulty in repairing these units in the future.

It should also be noted that chemical stripping agents would likely need to be used to prep and refinish the windows and this may result in special ventilation or occupant comfort considerations. Lastly, the remediation in place option does not allow for a full waterproofing system to be installed between the window units and the mass wall openings they are hung in.

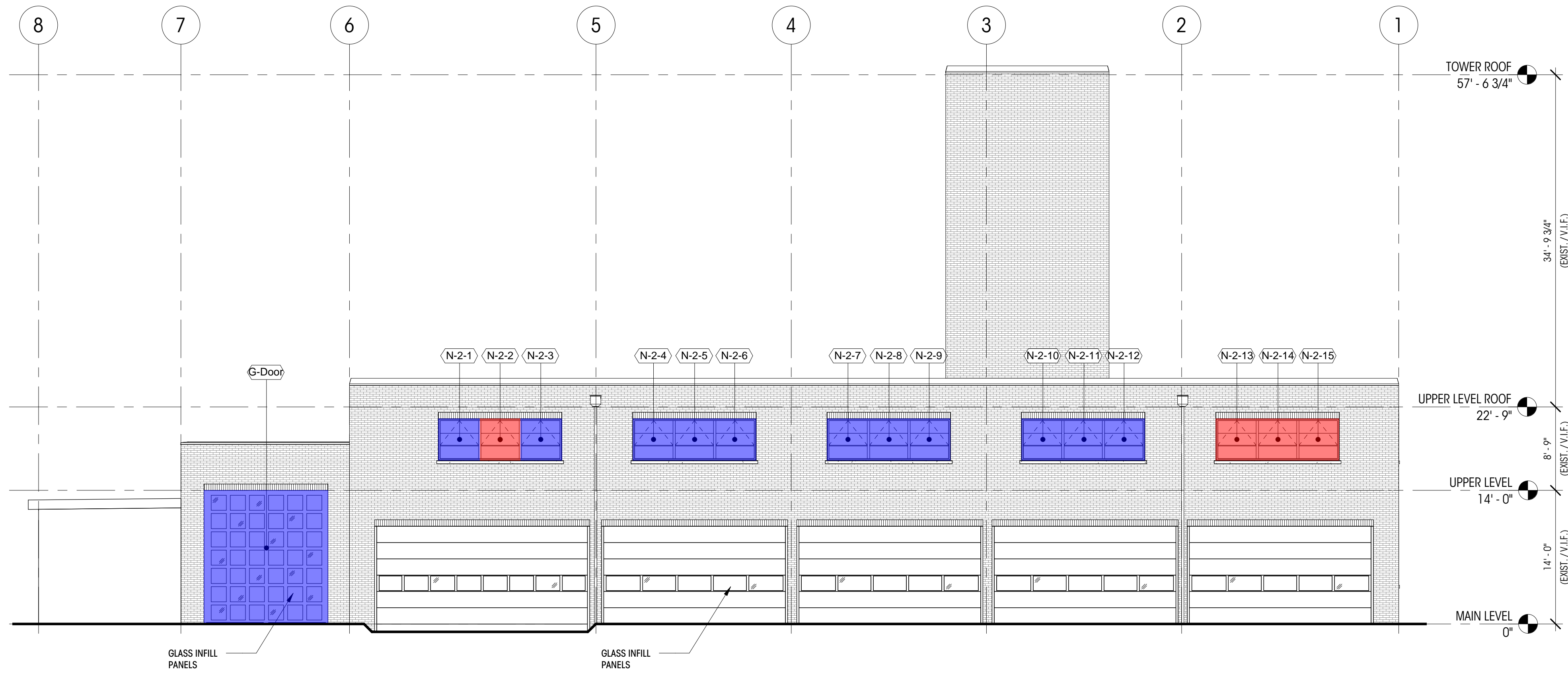
The waterproofing in this strategy would be accomplished by the glazing compounds used at the mullions and a surface applied silicone sealant bead application at both the outboard and inboard faces of the frames to the masonry openings. This "barrier" approach would require a high degree of maintenance to perform its' function over time.

The full replacement approach will still have significant cost considerations in that newly produced windows of this size and scale are certainly not inexpensive, nor is the labor required to install them negligible. That said, this approach offers a scheduling advantage as less time and effort will be required to install new products that have a factory applied finish than having to repair/replace and re-finish select parts/pieces. From a performance standpoint, new units would be constructed to provide contemporary thermal and solar heat gain advantages that will help reduce cooling/heating costs and improve occupant comfort, in addition to enhancing the overall longevity of the building while providing a greater range of usability for potential future occupancies. This approach would also not involve the use of any chemical stripping/re-finishing agents that could create additional coordination to accommodate. Lastly, this approach also allows for a full waterproofing system to be installed between the window frames and the masonry openings that includes a sill pan that drains any moisture taken in through the exterior sealants joints out to the exterior. While the sealant joints and glazing would still require maintenance, it is not as critical as there would be an additional moisture mitigation system in place should those fail.

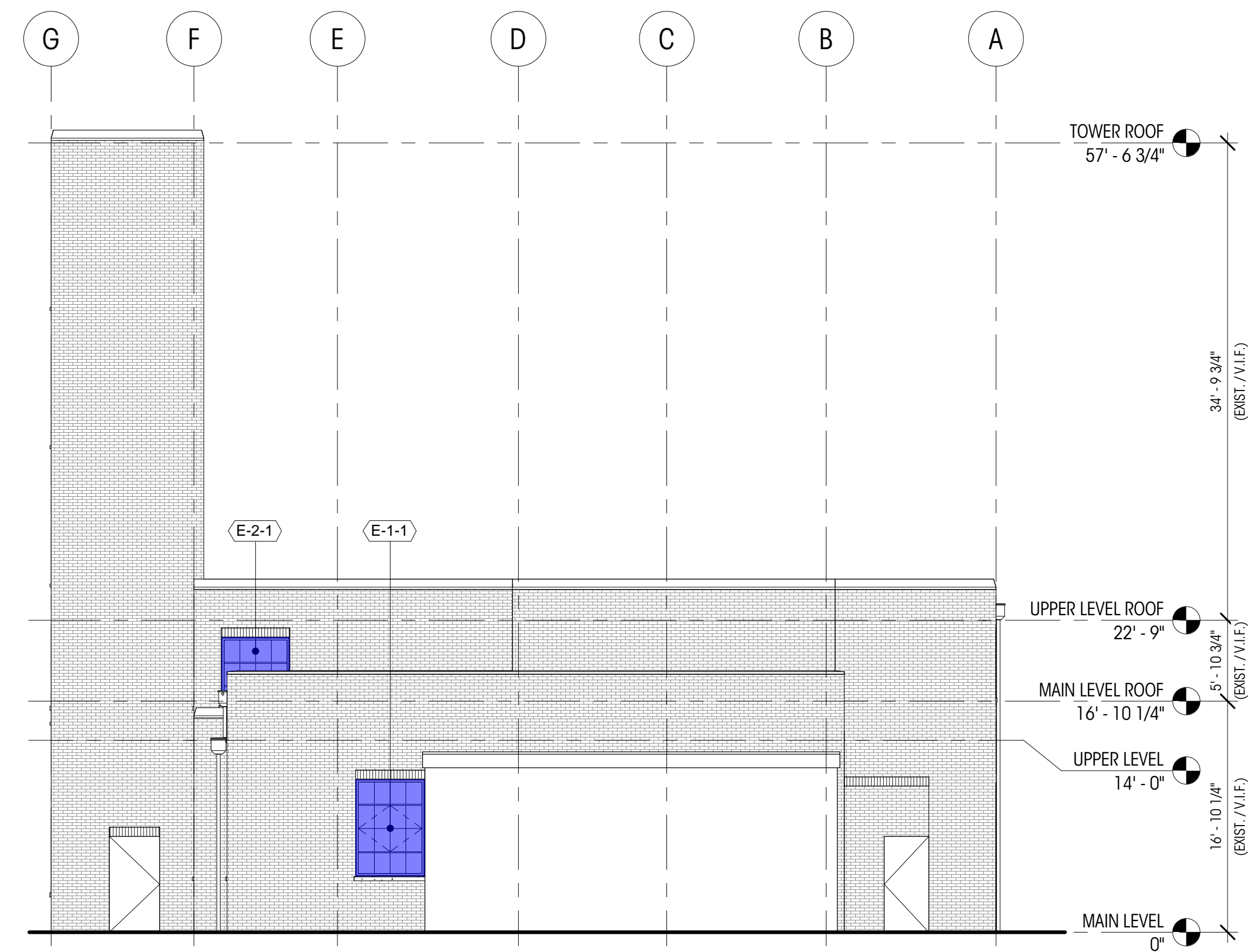
Recommendations

In light of the considerations above, BEE recommends that the full replacement approach be strongly considered by our client. When comparing cost and schedule considerations, it does appear that this strategy will be less costly when compared to the remediation in place option with the thermally sufficient Spacia glazing, while also offering better performance and additional manufacturer warranty coverage. In terms of schedule, the full replacement will also likely be the quicker and less impactful to the occupants and ultimate construction schedule. The thermal, air and waterproofing performance aspects of the replacement units will be far superior to the performance of the remediated windows as well. This will directly translate into increased occupant comfort and go a long way towards achieving our Energy Code compliance goals as they will be a major envelope enhancement that will greatly increase the thermal energy efficiency of the building. Knowing that substantial thermal improvement of the masonry mass walls or roofing system is likely not going to be possible, the improvement of these glazing systems will go a long way towards hitting the energy efficiency targets that the City of Seattle will ultimately decide are required for the project. Understanding that maintaining the historic nature of the building is a crucial consideration, BEE recommends that samples of the new windows are prepared and finished to the historic preservation standards required and assessed by the relevant authorities to allay any potential concerns regarding their impact to the historic nature of the project. BEE is confident that this, along with a review of a detailed cost analysis for both options will likely confirm our recommendation that the full replacement option is the superior approach for our client to take.

Respectfully,
Chad Brickner, RRC CDT
Senior Project Manager, BEE Consulting, LLC



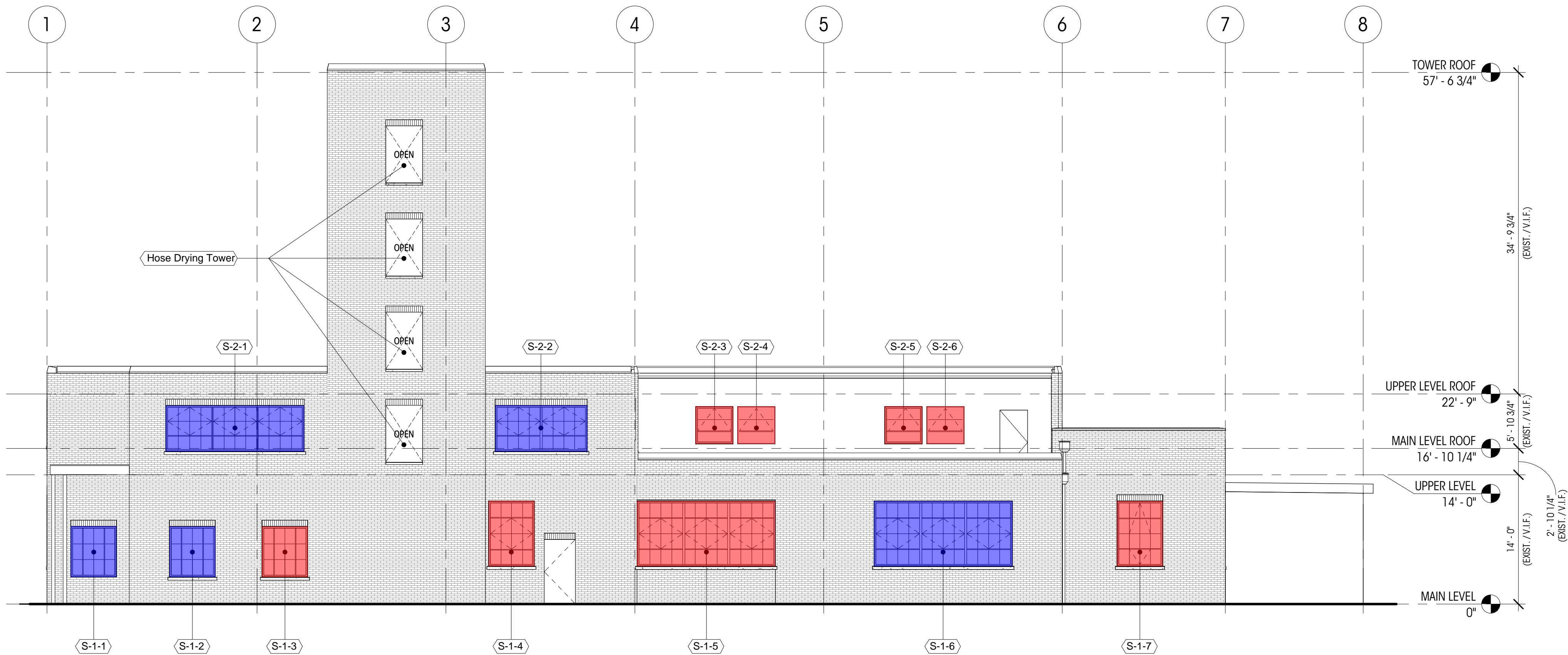
2 NORTH ELEVATION - AS-BUILT
1/8" = 1'-0"



1 EAST ELEVATION - AS-BUILT
1/8" = 1'-0"

LEGEND

- POOR CONDITION
- TYPICAL / FAIR CONDITION
- EXISTING WINDOW TAG



2 SOUTH ELEVATION - AS-BUILT
1/8" = 1'-0"

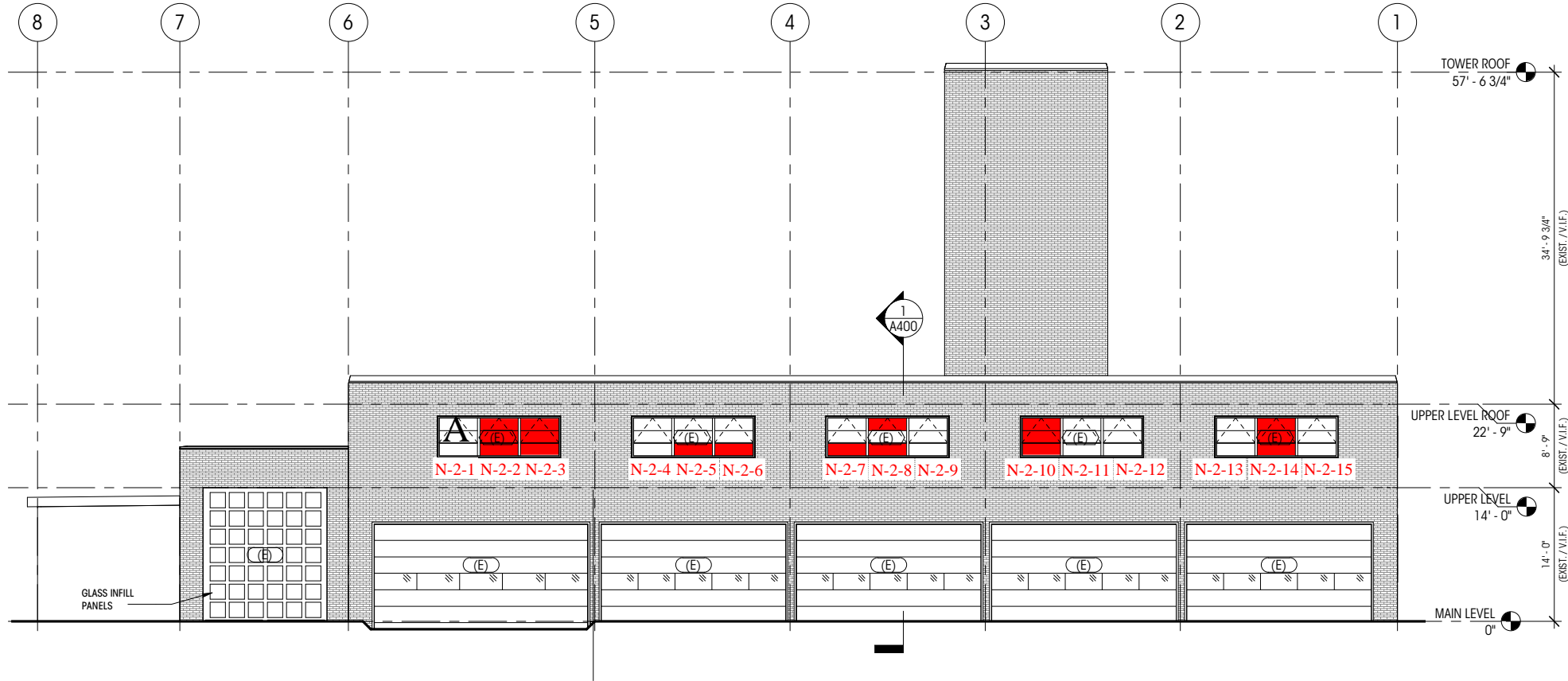


1 WEST ELEVATION - AS-BUILT
1/8" = 1'-0"

LEGEND

- POOR CONDITION
- TYPICAL / FAIR CONDITION
- EXISTING WINDOW TAG

■ = Broken Lite



2 NORTH ELEVATION - AS-BUILT
1/8" = 1'-0"



1 WEST ELEVATION - AS-BUILT
1/8" = 1'-0"

Brandt
Design Group

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OUTDOORS FOR ALL HQ

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AS-BUILTS

DATE: 12/14/20

SHEET SIZE: D (24X36)

REVISIONS
NO. DATE:

DRAWN BY: KJ
CHECKED BY: KM

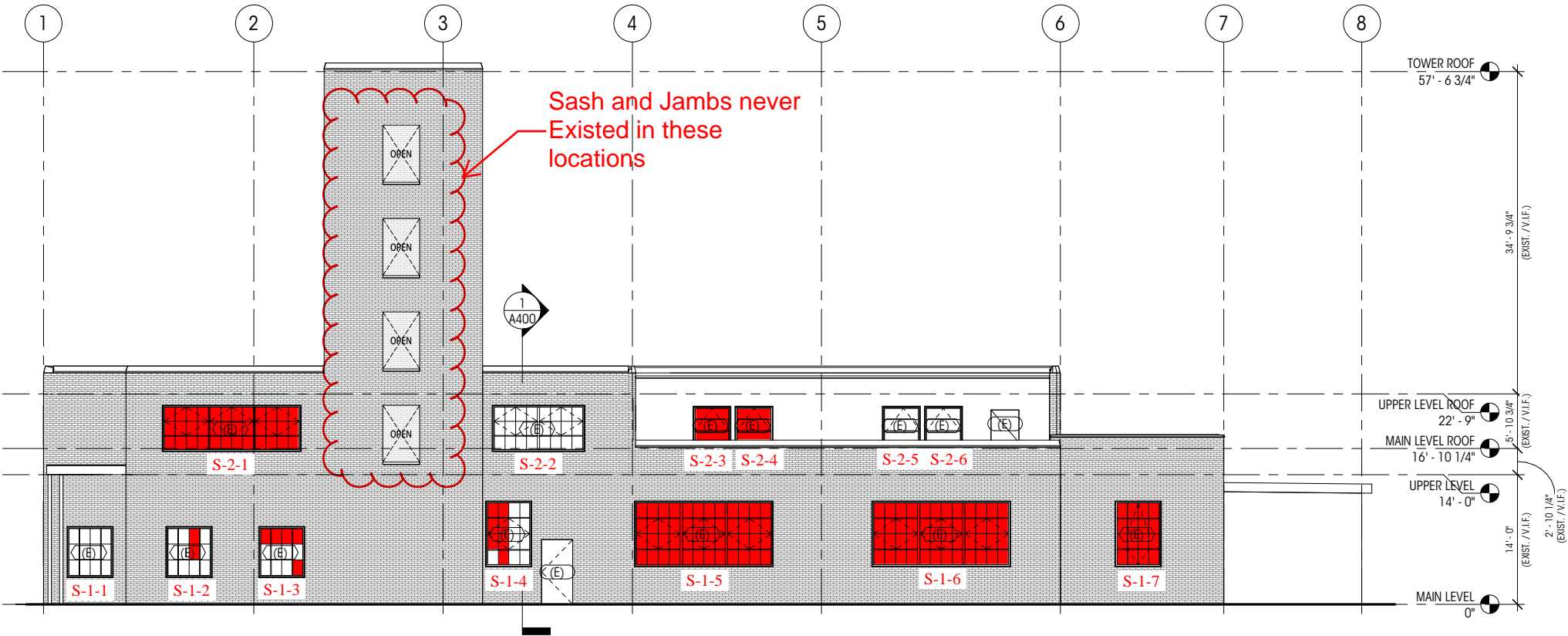
AS-BUILT EXTERIOR
ELEVATIONS

SCALE: 1/8" = 1'-0"

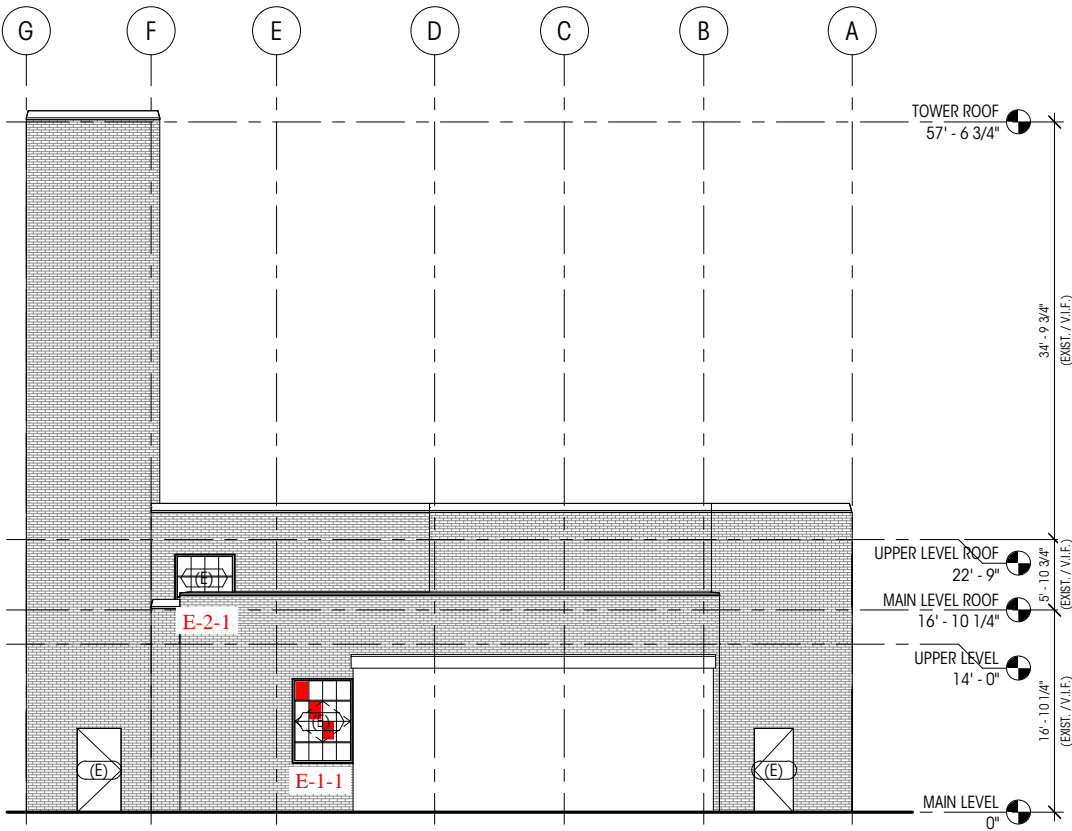
NOT FOR
CONSTRUCTION
FOR REVISIONS
ONLY
AB300

DEDICATED
APPROVAL
STAMP SPACE

■ = Broken Lite



2 SOUTH ELEVATION - AS-BUILT
1/8" = 1'-0"



1 EAST ELEVATION - AS-BUILT
1/8" = 1'-0"

BUILDING 18 WINDOW SURVEY

WINDOW LOCATION	WINDOW CONDITION	HARDWARE	GLASS	CRITICAL DIMENSIONS	NOTES
N-2-1	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	Exterior Glaze (Typ. For 2nd Floor), Center Mullion Cap Missing, Operator not fully seating into frame
N-2-2	Poor	Missing / Broken	1/8" Clear	49" x 50"	
N-2-3	Typical / Fair	Missing / Broken	1/8" Clear	49" x 50"	Deterioration occurring at head of jamb, Rust and pitting occurring at center mullion
N-2-4	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	
N-2-5	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	Surface Rust at Bottom Rail - Lower Right Hand Side
N-2-6	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	Exterior Glaze
N-2-7	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	
N-2-8	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	
N-2-9	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	
N-2-10	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	
N-2-11	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	Split by interior wall framing
N-2-12	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	
N-2-13	Poor	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	Surface Rust and Pitting Beginning on Bottom Rail and Mullion
N-2-14	Poor	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	Surface Rust and Pitting Beginning on Bottom Rail and Mullion
N-2-15	Poor	Casement Lock 2 Hinges	1/8" Clear	49" x 50"	Surface Rust and Pitting Beginning on Bottom Rail and Mullion
W-1-1	Typical / Fair	2 Casement Locks 4 Hinges	1/8" Clear	119" x 82"	Sill Backfilled with Mortar, Interior Putty Glaze, Painted Hardware Appears Intact, Failing and Deteriorated Glazing, Head Reinforced with Steel L-Bracket
W-1-2	Typical / Fair	1 Casement Lock 2 Hinges	1/8" Clear	60" x 82"	Rust and deterioration beginning at left side of stool
W-1-3	Typical / Fair	Missing / Broken	1/8" Clear	60" x 82"	
W-1-4	Typical / Fair	2 Casement Locks 4 Hinges	1/8" Clear	119" x 82"	Steel Center Mullion
W-2-1	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	62" x 52"	Glazed from Exterior, Plaster Returns to Sash
W-2-2	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	62" x 52"	
W-2-3	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	62" x 52"	Back splash of sink tied to stool
W-2-4	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	62" x 52"	Film on interior peeling off
W-2-5	Typical / Fair	Casement Lock 2 Hinges	1/8" Clear	62" x 52"	
S-1-1	Typical / Fair	Missing / Broken	Historic Obscure Glazing	58" x 62"	
S-1-2	Typical / Fair	Casement Lock	1/8" Clear	Presumed 58" x 62"	
S-1-3	Poor	Missing / Broken	Painted / Obscure Glass	58" x 62"	Painted Obscure Glazing, Rust Forming in Glazing Bed
S-1-4	Poor	Missing / Broken	Painted / Obscure Glass	59" x 83"	Broken Missing Latch
S-1-5	Poor	Missing / Broken	Painted / Obscure Glass	180" x 82"	No operator in center of 3 wide, Inboard window same size and location of N-1-5 no salvageable hardware, Rust in glazing bed
S-1-6	Typical / Fair		Painted / Obscure Glass	Presumed 180" x 82"	Typical conditions compared to the remaining steel casement mull windows
S-1-7	Poor	Casement Lock Hinges	1/8" Clear	60" x 82"	Rust in Glazing Bed
S-2-1	Typical / Fair	Casement Locks at Center Operators	Painted / Obscure Glass	62" x 180"	Steel Mullions
S-2-2	Typical / Fair	Missing / Broken	1/8" Clear, Painted / Obscure Glass	120' x 62"	
S-2-3	Poor	Missing / Broken	Historic Obscure Glazing	49" x 50"	Deterioration at center mullion cap. Rust and pitting are occurring
S-2-4	Poor	Missing / Broken	Historic Obscure Glazing	49" x 50"	
S-2-5	Poor	Missing / Broken	1/8" Clear, Historic Obscure Glass	49" x 50"	Obscure 2 bottom rows / Surface rust and pitting occurring
S-2-6	Poor	Missing / Broken	1/8" Clear, Historic Obscure Glass	49" x 50"	
E-1-1	Typical / Fair	Casement Lock Hinges	1/8" Clear	60" x 82"	
E-2-1	Typical / Fair	None	1/8" Clear, Painted / Obscure Glass	58" x 62"	Louver in Sash
G-Door	Typical / Fair		Obscure	156" x 169"	Overall the Door is a Candidate for Restoration
Hose Drying Tower					No Existing Sash and Jambs. Appears to Never Have Existed at These Locations



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Casement mulls
WINDOW LOCATION	W-1-1
WINDOW CONDITION	Typical/Fair
HARDWARE	2 casement Locks 4 hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	119" X 82"

NOTES/COMMENTS:

PHOTOS:





Painted hardware
appears intact

Sill backfilled with
mortar

Interior Putty Glaze



Hinge Location for
Center Pivot Steel
Awning Sash



Failing and
Deteriorated Glazing



Head detail of sash
reinforced with steel
"L-Bracket"





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	W-1-2
WINDOW CONDITION	Typical/ Fair
HARDWARE	1 casement Lock 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	60" X 82"

NOTES/COMMENTS:

PHOTOS:



Rust and
deterioration
beginning at left side
of stool.





Hardware is
broken/missing









**Rafn- BLDG#18
WINDOW SURVEY**

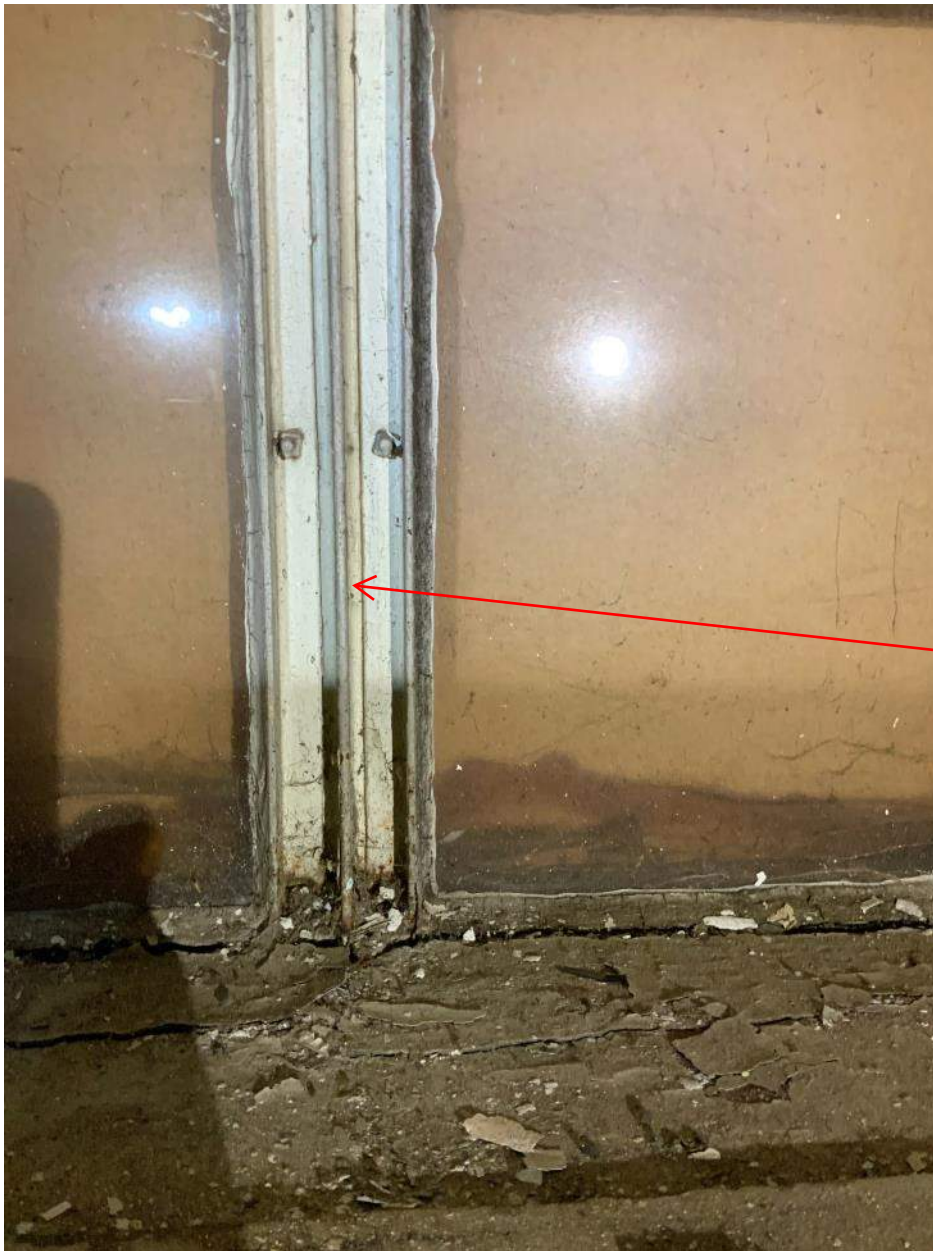
DESCRIPTION	Casement Mull
WINDOW LOCATION	W-1-4
WINDOW CONDITION	Typical/Fair
HARDWARE	Two casement Locks/ 4Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	119"X82"

NOTES/COMMENTS:

PHOTOS:



Hardware intact



Steel Center Mullion





Historic Obscure
Glazing



Broken/Missing
Hardware.



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	S-1-2
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement Lock
GLASS	1/8" Clear
CRITICAL DIMENSIONS	Presumed 58"X62"

NOTES/COMMENTS:

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	S-1-3
WINDOW CONDITION	Poor
HARDWARE	Broken/Missing
GLASS	Painted/Obscure Glass
CRITICAL DIMENSIONS	58"X62"

NOTES/COMMENTS:

Painted obscure glazing

PHOTOS:



Rust is beginning to
form in the glazing bed





Painted obscure
glazing



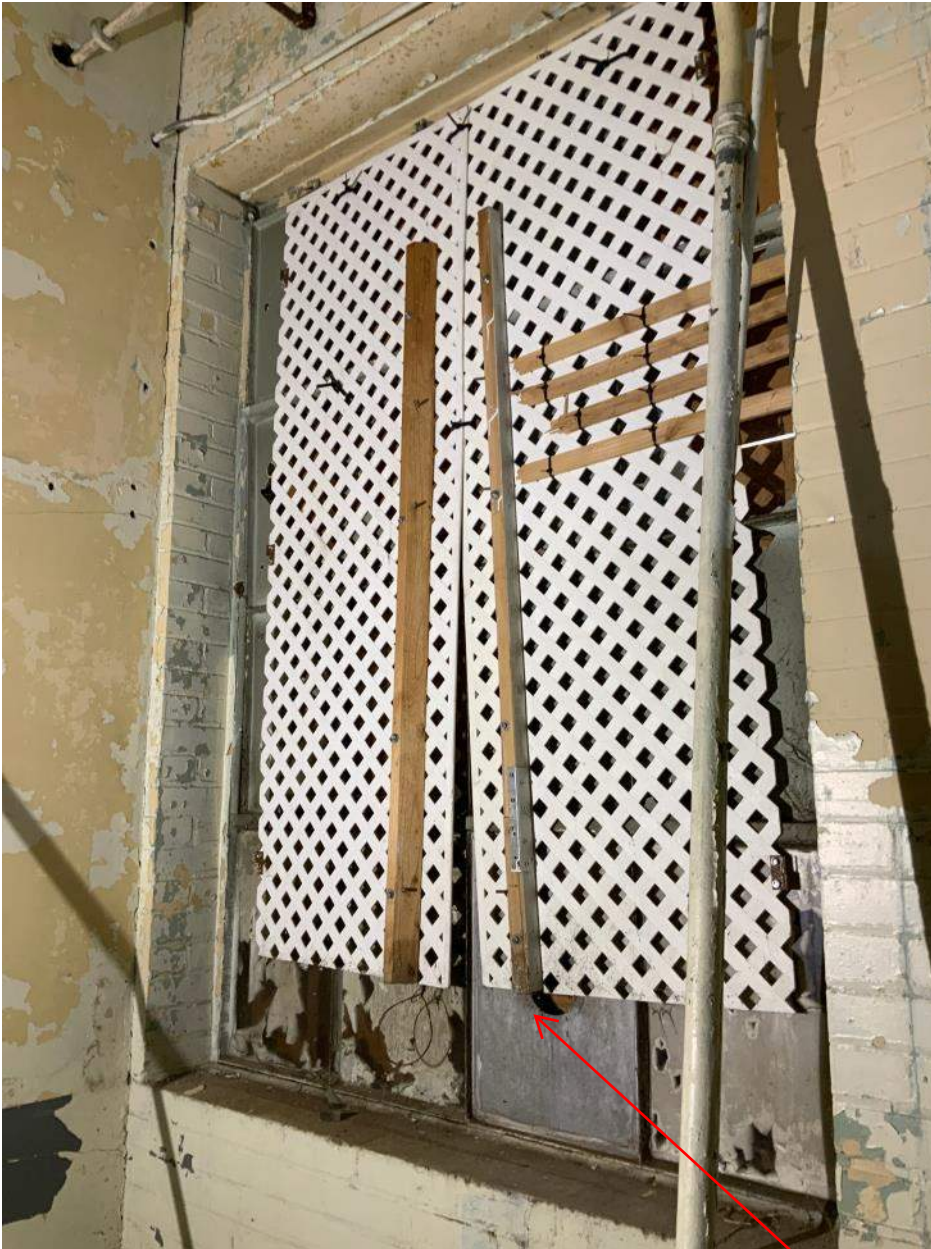
**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	S-1-4
WINDOW CONDITION	Poor
HARDWARE	Missing/Broken
GLASS	Obscure/Painted Glazing
CRITICAL DIMENSIONS	59"X83"

NOTES/COMMENTS:

Broken missing latch

PHOTOS:



Mechanical louver



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Casement Mull
WINDOW LOCATION	S-1-5
WINDOW CONDITION	Poor
HARDWARE	Missing/Broken
GLASS	Obscure/Painted Glazing
CRITICAL DIMENSIONS	180"X82"

NOTES/COMMENTS:

No operator in center of 3 wide

Inboard window same size and location of n-1-5 no salvageable hardware

Rust at Glazing Bed

PHOTOS:





Rust forming in glazing bed

Interior wall splitting three wide at steel mullion







Sash is located directly
inboard of N-1-5.
There is no
salvageable hardware



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Casement Mull
WINDOW LOCATION	S-1-6
WINDOW CONDITION	
HARDWARE	
GLASS	Obscure/Painted Glazing
CRITICAL DIMENSIONS	180"X82" assumed

NOTES/COMMENTS:

Typical Conditions compared to the remaining steel casement mull windows.

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	S-1-7
WINDOW CONDITION	Poor
HARDWARE	Casement Lock/ Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	60"X82"

NOTES/COMMENTS:

Rust in Glazing Bed

PHOTOS:





Rust is forming in the
glazing bed. Most
glazing is broken. This
Opening was also left
off of the current
elevations





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	E-1-1
WINDOW CONDITION	Typical/ Fair
HARDWARE	Casement Lock/ Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	60"X82"

NOTES/COMMENTS:

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	W-2-1
WINDOW CONDITION	Typical/ Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	62"X52"

NOTES/COMMENTS:

Exterior Glazing

PHOTOS:

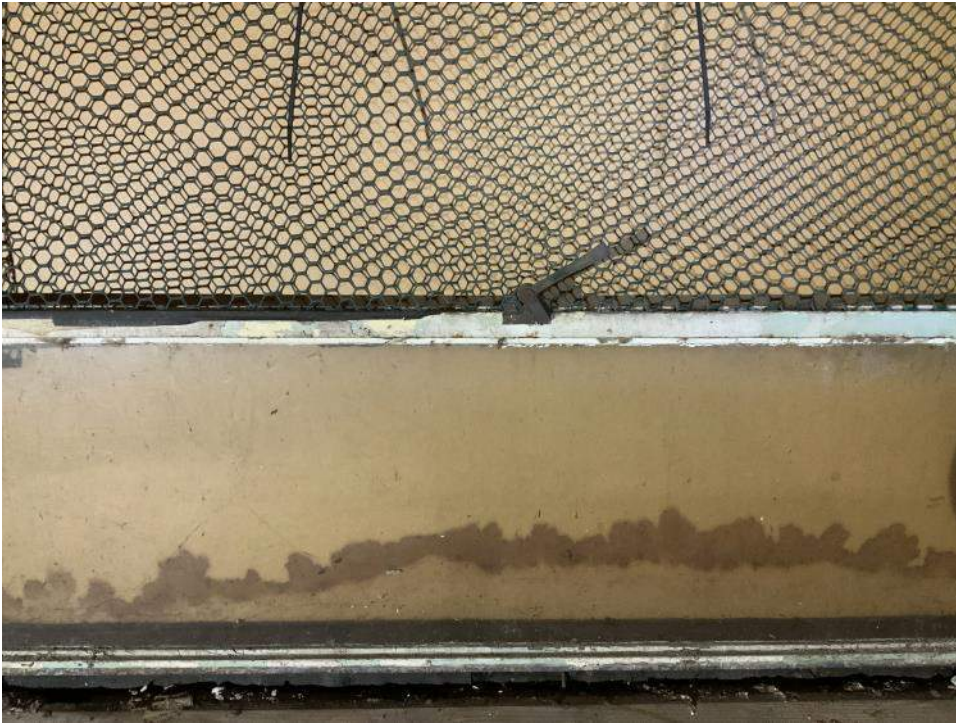


This style sash is
glazed from the
exterior



Plaster return directly
into sash







**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	W-2-2
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	62"X52"

NOTES/COMMENTS:

PHOTOS:







**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	W-2-3
WINDOW CONDITION	Typical/ Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	62"X52"

NOTES/COMMENTS:

Back splash of sink tied to stool

PHOTOS:







**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	W-2-4
WINDOW CONDITION	Typical/ Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	62"X52"

NOTES/COMMENTS:

Film on interior peeling off

PHOTOS:



Interior Film Peeling



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	W-2-5
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	62"X52"

NOTES/COMMENTS:

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Casement Mull
WINDOW LOCATION	S-2-1
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement Locks at center operators
GLASS	Obscure/Painted Glazing
CRITICAL DIMENSIONS	62" X 180"

NOTES/COMMENTS:

PHOTOS:



Painted Obscure
Glazing

Steel Mullions







Hardware
missing/Broken





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	
WINDOW LOCATION	G-Door
WINDOW CONDITION	Typical/ Fair
HARDWARE	
GLASS	Obscure
WEIGHTS	
TRIM	
OSB DIMENSIONS	
CRITICAL DIMENSIONS	156"X169"

NOTES/COMMENTS:

Painted glass

Overall the Door is a candidate for restoration.

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	E-2-1
WINDOW CONDITION	Typical/Fair
HARDWARE	None
GLASS	1/8" Clear/ Obscure Painted Glazing
CRITICAL DIMENSIONS	58"X62"

NOTES/COMMENTS:

Louver in Sash

PHOTOS:



Mechanical Louver





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	S-2-3 & S-2-4
WINDOW CONDITION	Poor
HARDWARE	Missing/ Broken
GLASS	Historic Obscure Glazing
CRITICAL DIMENSIONS	49"X50" x2

NOTES/COMMENTS:

PHOTOS:



Deterioration at center mullion cap. Rust and pitting are occurring



Broken/Missing
Hardware



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	S-2-5 & S-2-6
WINDOW CONDITION	Poor
HARDWARE	Missing/ Broken
GLASS	1/8" Clear/ Historic Obscure Glass
CRITICAL DIMENSIONS	49"X50" x2

NOTES/COMMENTS:

Obscure 2 bottom rows/ Surface Rust and Pitting Occurring

PHOTOS:





Heavy rust and pitting
occurring at horizontal
meeting rail



Missing/Broken
Hardware and heavily
rusted



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-1
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

Typical Note for Second Floor:
Exterior glaze

PHOTOS:



Center Mullion Cap is missing



Operator is not fully
seating into frame.



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-2
WINDOW CONDITION	Poor
HARDWARE	Missing/Broken
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

PHOTOS:



Center Mullion Cap is
missing





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-3
WINDOW CONDITION	Typical/Fair
HARDWARE	Missing/Broken
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

PHOTOS:







Deterioration occurring
at head of jamb



Rust and pitting
occurring at center
mullion



**Rafn- BLDG#18
WINDOW SURVEY**

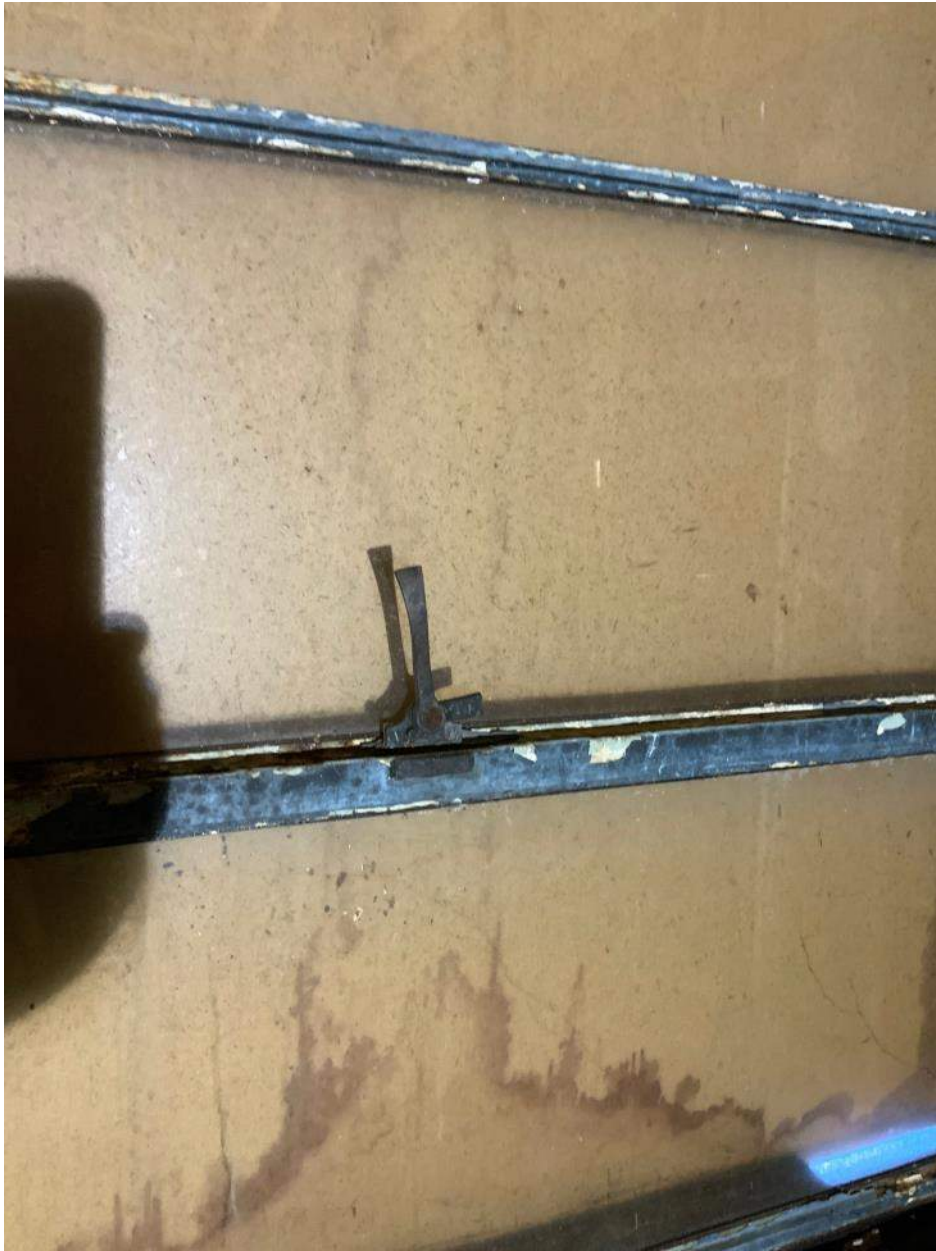
DESCRIPTION	Awning
WINDOW LOCATION	N-2-4
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

PHOTOS:









**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-5
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

Surface Rust at bottom rail, lower right hand side

PHOTOS:



Rust and pitting
occurring



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-6
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

Exterior glazing

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-7
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-8
WINDOW CONDITION	Typical/ Fair
HARDWARE	Casement lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-9
WINDOW CONDITION	Typical/ Fair
HARDWARE	Casement lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-10
WINDOW CONDITION	Typical/Fair
HARDWARE	Casement lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-11
WINDOW CONDITION	Typical/ Fair
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

Split by interior wall framing

PHOTOS:



N-2-11 is split by
interior wall framing





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-12
WINDOW CONDITION	Typical/ Fair
HARDWARE	Casement Lock/ Two Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-13
WINDOW CONDITION	Poor
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

Surface Rust and Pitting Beginning on Bottom Rail and Mullion

PHOTOS:



Surface Rust and
Pitting



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-14
WINDOW CONDITION	Poor
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

Surface Rust and Pitting Beginning on Bottom Rail and Mullion

PHOTOS:



Surface Rust and
Pitting



**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Awning
WINDOW LOCATION	N-2-15
WINDOW CONDITION	Poor
HARDWARE	Casement Lock/ 2 Hinges
GLASS	1/8" Clear
CRITICAL DIMENSIONS	49"X50"

NOTES/COMMENTS:

Surface Rust and Pitting Beginning on Bottom Rail and Mullion

PHOTOS:





**Rafn- BLDG#18
WINDOW SURVEY**

DESCRIPTION	Hose Drying Tower
WINDOW LOCATION	Hose Drying Tower
WINDOW CONDITION	
HARDWARE	
GLASS	
WEIGHTS	
TRIM	
OSB DIMENSIONS	
CRITICAL DIMENSIONS	

NOTES/COMMENTS:

No Existing Sash and Jambs

PHOTOS:











**Rafn- BLDG#18
WINDOW SURVEY**

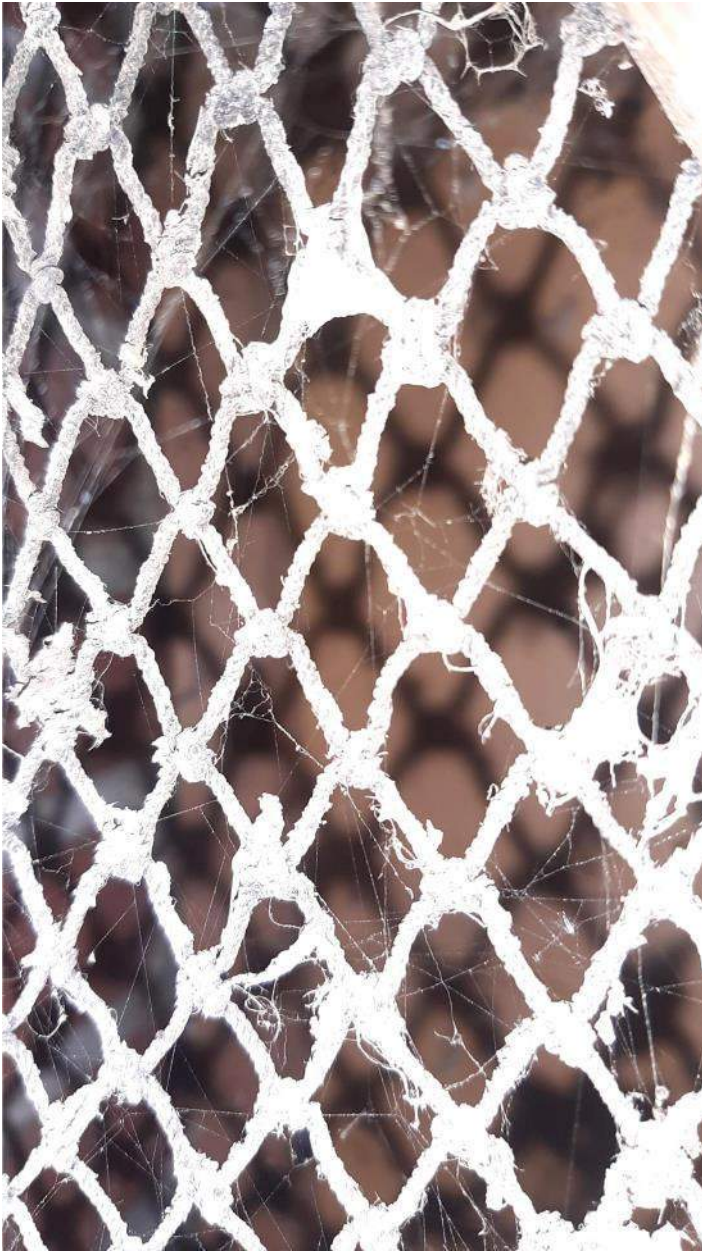
DESCRIPTION	Hose Drying Tower
WINDOW LOCATION	Hose Drying Tower
WINDOW CONDITION	
HARDWARE	
GLASS	
WEIGHTS	
TRIM	
OSB DIMENSIONS	
CRITICAL DIMENSIONS	42"X73"

NOTES/COMMENTS:

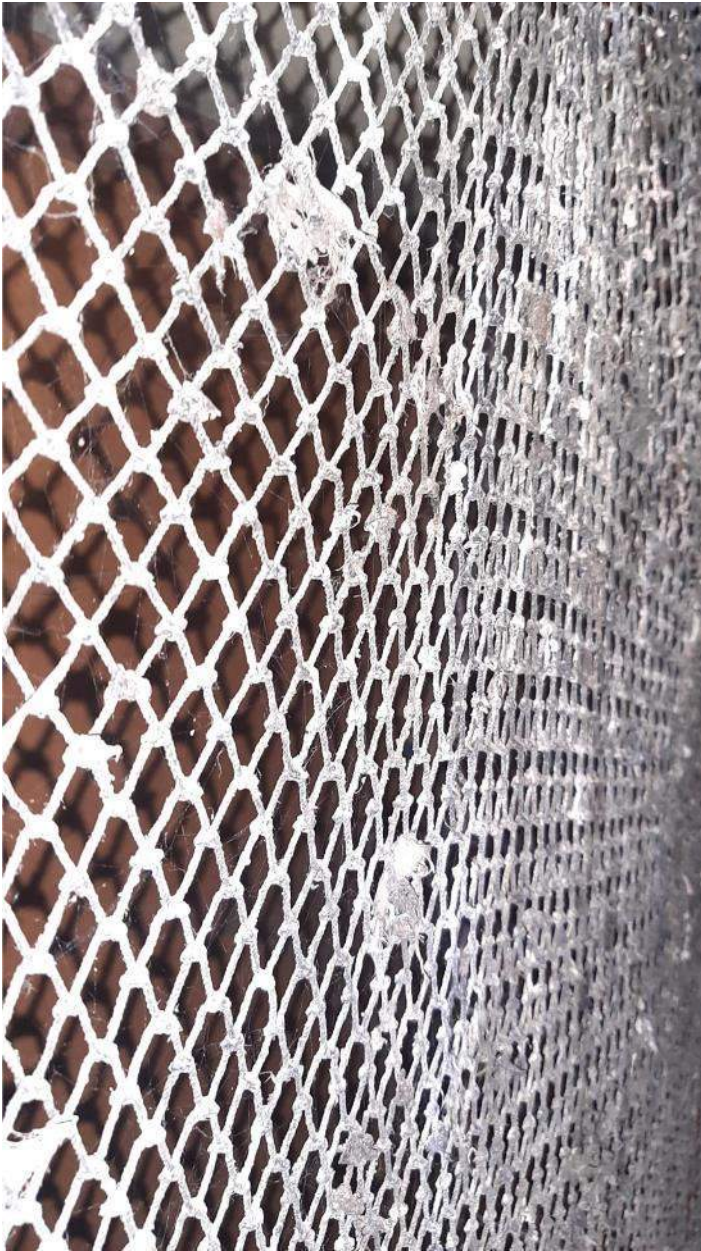
It appears sash and jambs never existed in these locations

PHOTOS:









There appears to
be a masonry sill,
but no remnants of
a jamb or sash







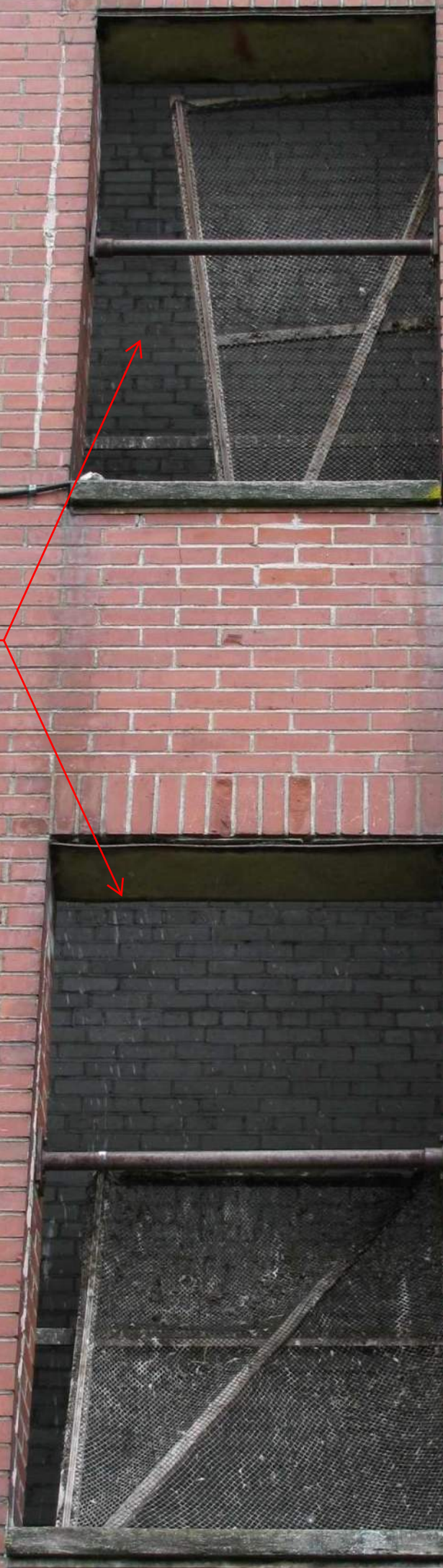


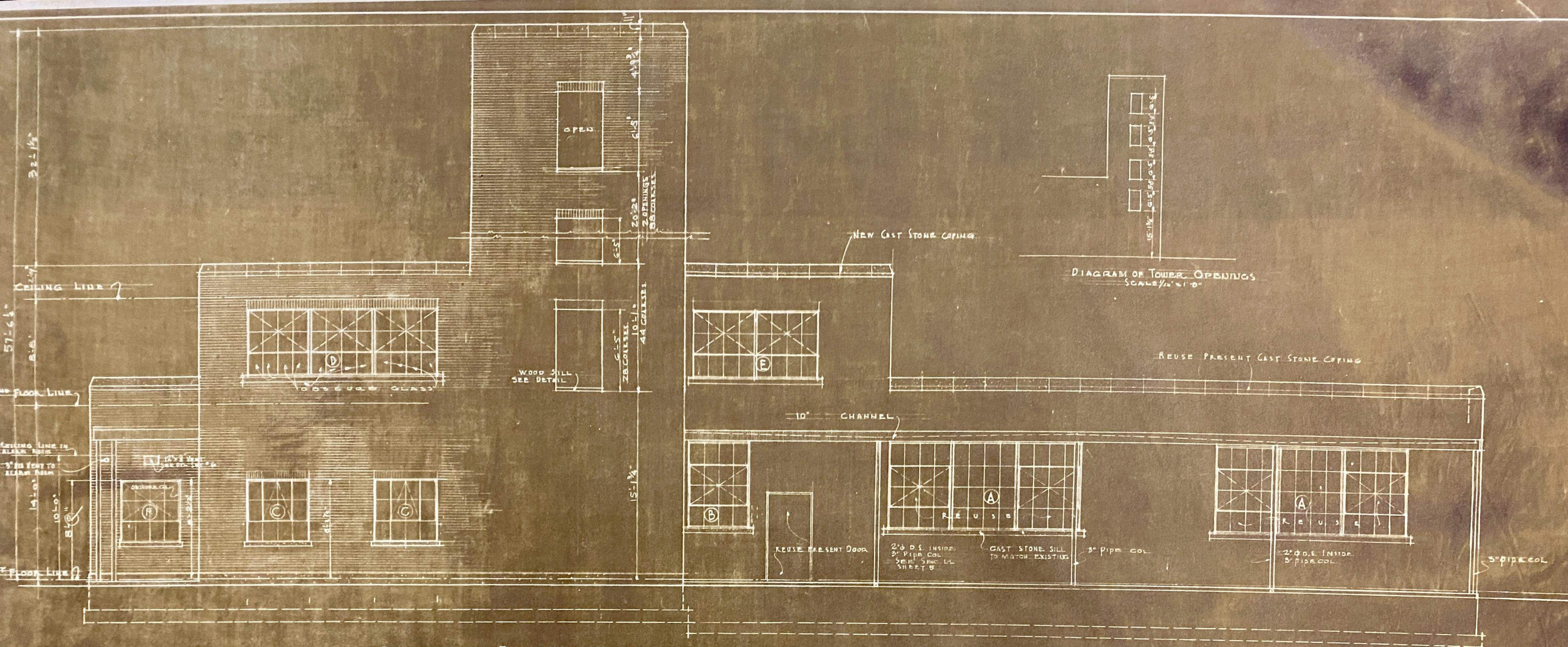




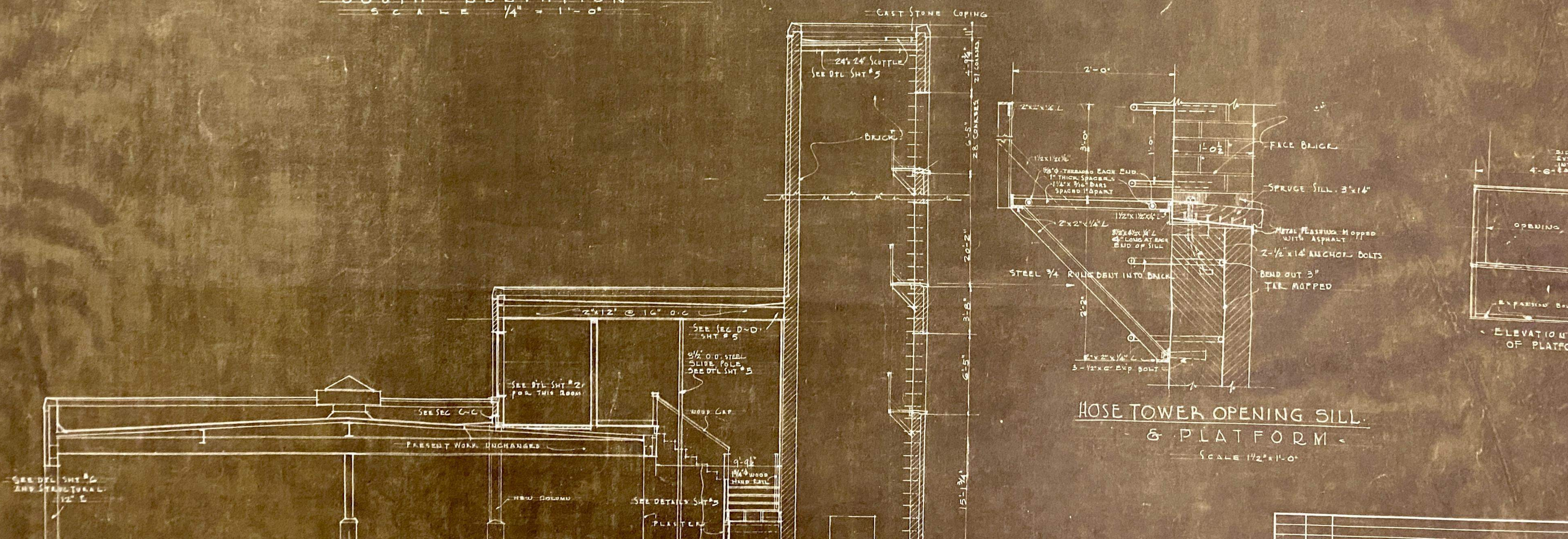


Photo Documentation
Shows These
Windows Never
Existed





SOUTH ELEVATION
SCALE 1/4" = 1'-0"



HOSE TOWER OPENING SILL
& PLATFORM
SCALE 1/2" = 1'-0"